

CURRICULUM VITAE  
The Johns Hopkins University School of Medicine

(Signature)   
(Typed Name) Frederick Streeter Barrett

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(Date of this version)

**DEMOGRAPHIC AND PERSONAL INFORMATION****Current Appointments** (*in chronological order, earliest first by start date under each subcategory*)

2/2021-present Associate Professor  
Department of Psychiatry and Behavioral Sciences, Department of Neuroscience  
Johns Hopkins University School of Medicine, Baltimore, MD  
Department of Psychological and Brain Sciences  
Johns Hopkins University, Baltimore, MD

**Personal Data**

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**Education and Training** (*in chronological order, earliest first by start date under each subcategory*)

2004 B.A., Psychology, Music Education, *magna cum laude*, Minor: Cognitive Neuroscience  
Temple University, Philadelphia, PA

2013 Ph.D., Psychology  
University of California, Davis, Davis, CA

2013-2015 Fellow, Behavioral Pharmacology Research Unit  
Johns Hopkins University School of Medicine, Baltimore, MD

**Professional Experience** (*in chronological order, earliest first*)

2015-2016 Instructor, Psychiatry and Behavioral Sciences  
Johns Hopkins University School of Medicine, Baltimore, MD

2016-2021 Assistant Professor, Psychiatry and Behavioral Sciences  
Johns Hopkins University School of Medicine, Baltimore, MD

2021-Present Associate Professor  
Department of Psychiatry and Behavioral Sciences  
Johns Hopkins University School of Medicine, Baltimore, MD

2019-2022 Director, Neurophysiological Mechanism and Biomarker Assessment  
Center for Psychedelic and Consciousness Research  
Johns Hopkins University School of Medicine, Baltimore, MD

2022-2023 Associate Director, Center for Psychedelic and Consciousness Research  
Johns Hopkins University School of Medicine, Baltimore, MD

2023-present Director, Center for Psychedelic and Consciousness Research  
Johns Hopkins University School of Medicine, Baltimore, MD

## PUBLICATIONS

Original Research [OR] (trainees underlined)

1. Weisberg RW, Brinkman AR, Folio CJ, Dick A, Fleck JI, Niederberg B & **Barrett F** (2004). Toward a Cognitive Analysis of Creativity: Improvisation in Jazz. *Rivista Di Analisi E Teoria Musicale*, 2, 35-57.
2. Kohler CG, **Barrett F**, Gur RE, Turetsky BI & Moberg PJ (2007). Association between Facial Emotion Recognition and Odor Identification in Schizophrenia. *J Neuropsychiatry Clin Neurosci*, 19, 128-31.
3. Alvino C, Kohler C, **Barrett F**, Gur RE, Gur RC & Verma R (2007). Computerized measurement of facial expression of emotions in schizophrenia. *J Neurosci Methods*, 163, 350-61.
4. Wang P, **Barrett F**, Martin E, Milanova M, Gur RE, Gur RC, Kohler C & Verma R (2008). Automated Video Based Facial Expression Analysis of Neuropsychiatric Disorders. *J Neurosci Methods*, 168, 224-38.
5. Kohler CG, Loughhead J, Ruparel K, Indersmitten T, **Barrett FS**, Gur RE & Gur RC (2008). Brain activation during eye gaze discrimination in stable schizophrenia. *Schizophr Res*, 99, 286-93.
6. Kohler CG, Martin EA, Brensinger C, Bilker W, **Barrett F**, Verma R, Gur RE & Gur RC (2008). Static and dynamic measurements of facial expressions of emotions in schizophrenia. *Biological Psychiatry*, 63(7):127S-128S.
7. Shen GHC, Grandin LD, Alloy LB, **Barrett F**, Kohner M, Iacoviello B & Mils A (2008). Lifestyle Regularity and Cyclothymic Symptomatology. *J Clinical Psychology*, 64, 482-500.
8. Kohler CG, Martin EA, Stolar N, **Barrett FS**, Verma R, Brensinger C, Bilker W, Gur RE & Gur RC (2008). Static posed and evoked facial expressions of emotions in schizophrenia. *Schizophr Res*, 105, 49-60.
9. **Barrett FS**, Grimm KJ, Robins RW, Wildschut T, Sedikides C & Janata P (2010). Music-evoked nostalgia: affect, memory, and personality. *Emotion*, 10, 390-403.
10. **Barrett FS**, Robins RW & Janata P (2013). A Brief Form of the Affective Neuroscience Personality Scales. *Psychological Assessment*. 25(3):826-843.
11. Oakes LM, Baumgartner HA, **Barrett FS**, Messenger IM & Luck SJ (2013). Developmental changes in visual short-term memory in infancy: Evidence from eye-tracking. *Frontiers in Developmental Psychology*. 4:697.
12. Kaelen M, **Barrett FS**, Roseman L, Lorenz R, Family N, Bolstridge M, Curran V, Feilding A, Nutt DJ, & Carhart-Harris RJ (2015). LSD enhances the emotional response to music. *Psychopharmacology*, 232(19):3607-14.  
Role: Study conception and design, interpretation of results, writing manuscript.
13. **Barrett FS**, Johnson MW & Griffiths RR (2015). Validation of the Revised Mystical Experience Questionnaire in Experimental Sessions with Psilocybin. *Journal of Psychopharmacology*, 29(11):1182-90.
14. McPherson MJ, **Barrett FS**, Lopez-Gonzales M, Jiradejvong P & Limb CJ (2016). Emotional intent modulates the neural substrates of creativity: A functional magnetic resonance imaging study of musical improvisation. *Scientific Reports*, 4(6):18460.
15. Kaelen M, Roseman L, Kahan J, Ribeiro AS, Csaba O, Lorenz R, **Barrett FS**, Bolstridge M, Williams T, Wall M, McGonigle J, Leech R, Fielding A, Muthukumaraswamy S, Nutt D, Carhart-Harris R (2016). LSD modulates music-induced imagery via changes in parahippocampal connectivity. *European Neuropsychopharmacology*, 26(7):1099-109. Role: Development of study design, interpretation of results, editing manuscript.
16. Koen JD, **Barrett FS**, Harlow IM, Yonelinas AP (2016). The ROC Toolbox: A toolbox for analyzing receiver-operating characteristics derived from confidence ratings. *Behavioral Research Methods*. doi: 10.3758/s13428-016-0796-z
17. Dunn KE, **Barrett FS**, Yepez-Laubach C, Meyer AC, Hruska BJ, Sigmon SC, Fingerhood M, and Bigelow GE (2016). Brief Opioid Overdose Knowledge (BOOK): A Questionnaire to Assess Overdose Knowledge in Individuals Who Use Illicit or Prescribed Opioids. *Journal of Addiction Medicine*. 10(5):314-23
18. Dunn KE, **Barrett FS**, Fingerhood M, and Bigelow GE (2016). Opioid overdose history, risk behaviors, and knowledge in patients taking prescribed opioids for chronic pain. *Pain Medicine*. doi: 10.1093/pm/pnw228
19. **Barrett FS** & Janata P (2016). Neural responses to nostalgia-evoking music modeled by elements of dynamic musical structure and individual differences in affective traits. *Neuropsychologia*, 91:234-246
20. Dunn KE, **Barrett FS**, Herrmann ES, Plebani JG, Sigmon SC, & Johnson MW (2016). Behavioral Risk Assessment for Infectious Diseases (BRAID): Self-report instrument to assess injection and non-injection risk behaviors in substance users. *Drug and Alcohol Dependence*. 168:69-75.

21. Carbonaro TM, Bradstreet MP, **Barrett FS**, MacLean KA, Jesse R, Johnson MW, Griffiths RR (2016). Survey study of challenging experiences after ingesting psilocybin mushrooms: Acute and enduring positive and negative consequences. *Journal of Psychopharmacology*. doi: 10.1177/0269881116662634
22. **Barrett FS**, Bradstreet MP, Leoutsakos JMS, Johnson MW, Griffiths RR (2016). The Challenging Experience Questionnaire: Characterization of challenging experiences with psilocybin mushrooms. *Journal of Psychopharmacology*, 30(12):1279-1295.
23. Dunn KE, **Barrett FS**, Yepez-Laubach C, Meyer AC, Hruska BJ, Petruch K, Berman S, Sigmon SC, Fingerhood M, & Bigelow GE (2016). Opioid Overdose Experience, Risk Behaviors, and Knowledge in Drug Users from Rural versus Urban Settings. *Journal of Substance Abuse Treatment*, 71:1-7.  
Role: Statistical analysis, writing manuscript.
24. Kaelen M, Lorenz R, **Barrett FS**, Roseman L, Orban C, Santos-Ribeiro A, Wall MB, Feilding A, Nutt D, Muthukumaraswamy S, Carhart-Harris R, Leech R (2017). Effects of LSD on music-evoked brain activity. *bioRxiv*, DOI: 10.1101/153031  
Role: Development of study design, statistical analysis, interpretation of results, editing manuscript.
25. **Barrett FS**, Robbins H, Smooke D, Brown JL, Griffiths RR (2017). Qualitative and quantitative features of music reported to support peak mystical experiences during psychedelic therapy sessions. *Front Psychol*, 8:1238. DOI: 10.3389/fpsyg.2017.01238.
26. **Barrett FS**, Workman CI, Sair HI, Savonenko AV, Kraut MA, Sodums DJ, Joo JJ, Nassery N, Marano CM, Munro CA, Brandt J, Zhou Y, Wong DF, Smith GS (2017). Association between serotonin denervation and resting-state functional connectivity in mild cognitive impairment. *Human Brain Mapping*, 38(7):3391-3401.
27. Smith GS, **Barrett FS**, Joo JH, Nassery N, Marano CM, Munro CA, Brandt J, Savonenko A, Kraut MA, Zhou Y, Wong DF, Workman CI (2017). Molecular imaging of serotonin degeneration in mild cognitive impairment. *Neurobiology of Disease*, 105:33-41. DOI: 10.1016/j.nbd.2017.05.007.  
Role: statistical analysis, interpretation of results, writing manuscript.
28. **Barrett FS**, Johnson MW, Griffiths RR (2017). Neuroticism is associated with challenging experiences with psilocybin mushrooms. *Personality and Individual Differences*, 117:155-160. DOI: 10.1016/j.paid.2017.06.004.
29. **Barrett FS**, Preller KH, Herdener H, Janata, P, Vollenweider FX (2017). Serotonin 2A receptor signaling underlies LSD-induced alteration of the neural response to dynamic changes in music. *Cerebral Cortex*.
30. **Barrett FS**, Carbonaro TM, Hurwitz EH, Johnson MW, Griffiths RR (2018). Double-blind comparison of the two hallucinogens psilocybin and dextromethorphan: Effects on cognition. *Psychopharmacology*, 235(10):2915-2927.
31. Dunn KE, **Barrett FS**, & Bigelow GE (2018). Naloxone formulation or overdose reversal preference among patients receiving opioids for pain management. *Addictive Behaviors*. 86: 56-60.
32. Griffiths RR, Jesse R, MacLean KA, **Barrett FS**, Cosimano MP, Klindedinst MA, Johnson MW (2018). Psilocybin-occasioned mystical-type experience in combination with meditation and other spiritual practices produce enduring changes in prosocial attitudes and behaviors, and psychological functioning. *Journal of Psychopharmacology*, 32(1):49-69.
33. Seminowicz DA, Remeniuk B, Krimmel S, Smith MT, **Barrett FS**, Furman AJ, Wulff A, Geuter S, Lindquist MA, Irwin MR, Finan PH (2019). Pain-Related Nucleus Accumbens Function: Modulation by Reward and Sleep Disruption. *Pain*. 160(5): 1196-1207.  
Role: Study design, analysis, interpretation of results, editing manuscript.
34. Krimmel SR, White MG, Panicker MH, **Barrett FS**, Mathur BN, Seminowicz DA (2019). Resting-state functional connectivity and cognitive task-related activation of the human claustrum. *NeuroImage*. 196: 59-67.
35. Dunn KE, **Barrett FS**, Brands B, March DC, Bigelow GE (2019). Individual differences in human opioid abuse potential as observed in a human laboratory study. *Drug and Alcohol Dependence*, 205:107688.
36. Davis AK, **Barrett FS**, Griffiths RR (2020). Psychological flexibility mediates the relations between acute psychedelic effects and subjective decreases in depression and anxiety. *Journal of Contextual and Behavioral Science*, 15:39-45.
37. **Barrett FS**, Doss M, Sepeda N, Pekar JJ, Griffiths RR (2020). Emotions and brain function are altered up to one month after a single high dose of psilocybin. *Scientific Reports*, 10(1):1-14.
38. **Barrett FS**, Krimmel SR, Griffiths RR, Seminowicz DA, Mathur BN (2020). Psilocybin acutely alters the functional connectivity of the claustrum with brain networks that support perception, memory, and attention. *NeuroImage*. 281:116980 (third most popular article since at NeuroImage since publication of this article)

39. Doss MK, May DG, Johnson MW, Clifton JM, Hedrick SL, Prinszano TE, Griffiths RR, **Barrett FS** (2020). The Acute Effects of the Atypical Dissociative Hallucinogen Salvinorin A on Functional Connectivity in the Human Brain. *Scientific Reports*. 10(1):16392
40. Davis AK, **Barrett FS**, May DG, Cosimano MP, Sepeda ND, Johnson MW, Finan PH, Griffiths RR (2021). Effects of psilocybin-assisted therapy for major depressive disorder: A randomized clinical trial. *JAMA Psychiatry*. 78(5): 481-489
41. Garcia-Romeu A, **Barrett FS**, Carbonaro TC, Johnson MW, Griffiths RR (2021). Optimal dosing for psilocybin pharmacotherapy: Considering weight-adjusted and fixed dosing approaches. *Journal of Psychopharmacology*. Published Online February 20, 2021
42. Davis AK, **Barrett FS**, So S, Gukasyan N, Swift TC, Griffiths RR (2021). Development of the Psychological Insight Questionnaire among a sample of people who have consumed psilocybin or LSD. *Journal of Psychopharmacology*. 35(4): 437-446
43. Nayak SM, Gukasyan N, **Barrett FS**, Erowid E, Erowid F, Griffiths RR (2021). Classic Psychedelic Coadministration with Lithium, but Not Lamotrigine, is Associated with Seizures: An Analysis of Online Psychedelic Experience Reports. *Pharmacopsychiatry*, 54(5):240-245.
44. Doss MK, Považan M, Rosenberg MD, Sepeda ND, Davis AK, Finan PH, Smith GS, Pekar JJ, Barker PB, Griffiths RR, **Barrett FS** (2021). Psilocybin therapy increases cognitive and neural flexibility in patients with major depressive disorder. *Translational Psychiatry*, 11(1):1-10.
45. **Barrett FS**, Zhou Y, Carbonaro TM, Roberts JM, Smith GS, Griffiths RR, Wong DF (2022). Human cortical serotonin 2A receptor occupancy by psilocybin measured using [11C]MDL 100,907 dynamic PET and a resting-state fMRI-based brain parcellation. *Frontiers in Neuroergonomics*, 45
46. Finan P, Hunt C, Keaser M, Lerman S, Smith K, Bingham C, **Barrett F**, Zeidan F, Garland E, Seminowicz D (2022). Effects of savoring meditation on pain-related corticostriatal and positive emotional function. *The Journal of Pain*, 23(5):32-33.
47. Gukasyan N, Davis AK, **Barrett FS**, Cosimano MP, Sepeda ND, Johnson MW, Griffiths RR (2022). Efficacy and safety of psilocybin-assisted treatment for major depressive disorder: Prospective 12-month follow-up. *Journal of Psychopharmacology* 36(2):151-158.
48. Gaddis A, Lidstone DE, Nebel MB, Griffiths RR, Mostofsky SH, Mejia AF, **Barrett FS** (2022). Psilocybin induces spatially constrained alterations in thalamic functional organization and connectivity. *NeuroImage*, 260:119434.
49. Nikolaidis A, Lancelotta R, Gukasyan N, Griffiths RR, **Barrett FS**, Davis AK (2023). Subtypes of the psychedelic experience have reproducible and predictable effects on depression and anxiety symptoms. *Journal of Affective Disorders*, 324: 239-249.

#### Review Articles [RA]

50. Collins T, Tillman B, **Barrett FS**, Delbé C & Janata P (2014). A combined model of sensory and cognitive representations underlying tonal expectations in music: from audio signals to behavior. *Psychological Reviews*. 121(1):33-65
51. **Barrett FS**, Preller KH, Kaelen M (2018). Psychedelics and music: Neuroscience and therapeutic implications. *International Review of Psychiatry*. 30(4): 350-362.
52. Johnson MW, Hendricks PS, **Barrett FS**, Griffiths RR (2019). Classic psychedelics: An integrative review of epidemiology, mystical experience, brain network function, and therapeutics. *Pharmacology and Therapeutics*. 197:83-102.
53. Yaden DB, Johnson MW, Griffiths RR, Doss MK, Garcia-Romeu A, Nayak S, Gukasyan N, Mathur BN, **Barrett FS** (2021). Psychedelics and Consciousness: Distinctions, Demarcations, and Opportunities. *International Journal of Neuropsychopharmacology*, 24(8):615-623.
54. McCulloch DEW, Knudsen GM, **Barrett FS**, Doss MK, Carhart-Harris RL, Rosas FE, Deco G, Kringelbach ML, Preller KH, Ramaekers JG, Mason NL, Müller F, Fisher PM (2022). Psychedelic resting-state neuroimaging: a review and perspective on balancing replication and novel analyses. *Neuroscience and Biobehavioral Reviews*, 138: 104689.
55. Doss MK, Madden M, Gaddis A, Nebel MB, Griffiths RR, Mathur BN, **Barrett FS** (2022). Models of Psychedelic Drug Action: Modulation of Cortical-Subcortical Circuits. *Brain*, 145(2):441-456.
56. Madden MB, Stewart BW, White MG, Krimmel SR, Qadir H, **Barrett FS**, Seminowicz DA, Mathur BM (2022). A role for the claustrum in cognitive control. *Trends in Cognitive Sciences*, 26(12):1133-1152.

57. Sayali C, **Barrett FS** (2023). The costs and benefits of psychedelics on cognition and mood. *Neuron* 111:614-630
58. Tiwari P, Berghella AP, Sayali C, Doss MK, **Barrett FS**, Yaden DB (2023). Learned helplessness as a potential transdiagnostic therapeutic mechanism of classic psychedelics. *Psychedelic Medicine*, 1(2):74-86.
59. Medeiros GC, Matheson M, Demo I, Reid MJ, Matheson S, Twose C, Smith GS, Gould TD, Zarate CA, **Barrett FS**, Goes FS (2023). Brain-based correlates of antidepressant response to ketamine: A comprehensive systematic review of neuroimaging studies. *Lancet Psychiatry*, 2023/8/23.

#### Case Reports [CR]

60. **Barrett FS**, Schlienz N, Lembeck N, Waqas M, Vandrey R (2018). “Hallucinations” following acute cannabis dosing: A case report and comparison to other hallucinogenic drugs. *Cannabis and Cannabinoid Research*, 3(1):85-93.
61. Barrett KC, **Barrett FS**, Jiradejvong P, Rankin SK, Landau A, Limb CJ (2019). Classical creativity: A functional magnetic resonance imaging (fMRI) investigation of pianist and improviser Gabriela Montero. *NeuroImage*, 209:116496.

#### Book Chapters/Monographs [BC]

62. **Barrett FS**, Griffiths RR (2018). Classic Hallucinogens and Mystical Experiences: Phenomenology and Neural Correlates. *Behavioral Neurobiology of Psychedelic Drugs*, Halberstadt AL, Vollenweider FX, and Nichols DE (Eds.). Vol 36, *Current Topics in Behavioral Neuroscience*, Geyer MA, Marsden CA, Ellenbroek BA, Barnes TRE, Andersen SL, Paulus MP, Olivier J (Series Eds). Switzerland: Springer Nature.
63. Golden TL, Magsamen S, Sandu CC, Roebuck GM, Shi KM, **Barrett FS** (*in press*). Effects of setting on psychedelic experiences, therapies, and outcomes: A rapid scoping review of the literature. *Disruptive Psychopharmacology*, **Barrett FS**, Preller KH (Eds.). Vol 56, *Current Topics in Behavioral Neuroscience*, Geyer MA, Marsden CA, Ellenbroek BA, Barnes TRE, Andersen SL, Paulus MP, Olivier J (Series Eds). Switzerland: Springer Nature.

#### Books/Textbooks [BK]

64. **Barrett FS**, Preller KH (Eds) (2022). *Disruptive Psychopharmacology*. Vol 56, *Current Topics in Behavioral Neurosciences*, Geyer MA, Marsden CA, Ellenbroek BA, Barnes TRE, Andersen SL, Paulus MP, Olivier J (Series Eds). Switzerland: Springer Nature.

#### Editorials [ED]

65. Cotten SW, Strathmann FG, **Barrett FS**, Labay L, Mullally J, Sherwood AM, Wiegand F (2023). Psychedelics for medicinal use: How will this alter the collective laboratory consciousness? *Clinical Chemistry*, hvad016.

#### Letters, Correspondence [LC]

66. **Barrett FS**, Griffiths RR (2017). The factor structure of the Mystical Experience Questionnaire (MEQ): Reply to Bouso et al., 2016. *Human Psychopharmacology: Clinical and Experimental*. 32:e2564. doi: 10.1002/hup.2564
67. Doss MK, **Barrett FS**, Corlett PR (2022). Skepticism about recent evidence that psilocybin “liberates” depressed minds. *ACS Chemical Neuroscience*, 13(17): 2540-2543.
68. **Barrett FS** (2022). Comparative pharmacology and circuit-level models of the effects of psychedelic drugs on the human brain. *Biological Psychiatry: Cognitive Neuroscience and NeuroImaging*, 7(9): 849-851.

#### Media Releases or Interviews [MR]

1. Mint Press News (10/22/2015); <http://www.mintpressnews.com/from-psilocybin-to-mdma-researchers-are-in-the-throes-of-a-psychedelic-revival/210550/>
2. IFL Science (11/16/2015); <http://www.iflscience.com/brain/scientists-can-now-measure-mystical-effects-magic-mushrooms/>
3. Smart Drug Smarts Podcast (2/19/2016); <http://smartdrugsmarts.com/episode-116-psilocybin/>
4. Scientific American (4/13/2016); <https://www.scientificamerican.com/article/lsd-may-chip-away-at-the-brain-s-sense-of-self-network/>
5. CNN (6/3/2016); <http://www.cnn.com/2016/06/03/health/psychedelics-anxiety-depression-meditation/>

6. PsyPost (12/11/2016); <http://www.psypost.org/2016/12/scientists-new-tool-investigate-bad-trips-psychedelic-drugs-46424>
7. VICE (12/22/2016); [https://tonic.vice.com/en\\_us/article/the-10-things-that-go-wrong-when-youre-on-shrooms](https://tonic.vice.com/en_us/article/the-10-things-that-go-wrong-when-youre-on-shrooms)
8. Psymposia (11/22/2017); <https://www.psymposia.com/magazine/johns-hopkins-studying-effects-of-psilocybin-on-brains-of-long-term-meditators/>
9. PsyPost (3/5/2018); <https://www.psypost.org/2018/03/lsd-alters-neural-response-music-number-brain-regions-study-finds-50821>
10. ZME Science (3/6/2018); <https://www.zmescience.com/medicine/mind-and-brain/lsd-changes-brain-music-0432432/>
11. The Daily Pennsylvanian (4/7/2019); <https://www.thedp.com/article/2019/04/psychedelics-summit-intercollegiate-penn-lsd-upenn>
12. Pharmacy Times (9/6/2019); <https://www.pharmacytimes.com/news/johns-hopkins-launching-new-center-for-psychedelic-research>
13. NBC Minneapolis (KARE, Ch .11) (9/6/2019); <https://www.kare11.com/article/news/local/breaking-the-news/89-37b0afac-73e3-4c97-9a26-2b6aa06174ab>
14. The Telegraph (UK) (9/8/2019); <https://www.telegraph.co.uk/news/2019/09/08/worlds-largest-research-centre-look-surprising-health-benefits/>
15. Neuroscience News & Research (12/20/2019); <https://www.technologynetworks.com/neuroscience/articles/the-neuroscience-of-psychedelic-drugs-your-brain-on-psilocybin-with-frederick-streeter-barrett-328582>
16. Scientific American (1/16/2020); <https://www.scientificamerican.com/article/johns-hopkins-scientists-give-psychedelics-the-serious-treatment/>
17. PsyPost (1/25/2020); <https://www.psypost.org/2020/01/psychedelic-drugs-may-reduce-depression-and-anxiety-by-increasing-psychological-flexibility-55365>
18. CBS Baltimore (WJZ, Ch. 13) (2/10/2020); <https://baltimore.cbslocal.com/2020/02/10/johns-hopkins-research-psychedelic-drugs-shrooms-treating-addiction-quit-smoking-psilocybin/>
19. Brain Post (2/18/2020); <https://www.brainpost.co/weekly-brainpost/2020/2/18/exploring-the-long-term-effects-of-psychedelics-on-the-brain>
20. Bustle (8/5/2020); <https://www.bustle.com/wellness/magic-mushrooms-psilocybin-effects-on-brain-researchers>
21. Discover Magazine (10/9/2020); <https://www.discovermagazine.com/mind/what-psychedelic-mushrooms-are-teaching-us-about-human-consciousness>
22. Wired (10/14/2020); <https://www.wired.com/story/this-is-my-brain-on-salvia/>
23. Vogue (2/12/2021); <https://www.vogue.com/article/psychedelic-wellness-mental-health>
24. MIT Technology Review (3/16/2022); <https://www.technologyreview.com/2022/03/16/1047350/what-do-psychedelic-drugs-do-to-our-brains-ai-could-help-us-find-out/>
25. Neo.Life (3/17/2022); <https://neo.life/2022/03/my-psychiatrist-is-a-dj/>
26. Psychedelic Medicines Podcast (3/30/2022); <https://open.spotify.com/episode/3Oz6zuipMVoyTjTOoigIcH?>
27. PBS Vitals (3/31/2022); <https://www.youtube.com/watch?v=EKWHe3KZYQ4&t=59s>
28. The Hill (4/19/2022); <https://thehill.com/changing-america/well-being/3272317-psilocybin-the-active-ingredient-in-magic-mushrooms-makes-scientific-gains/>
29. WHY? – The Pulse (4/22/2022); <https://why.org/episodes/the-hidden-powers-of-fungi/>
30. NPR, All Things Considered (6/7/2022); [https://www.npr.org/2022/06/07/1103569550/psychedelics-might-be-the-next-big-thing-in-mental-health-care-experts-say?utm\\_campaign=storyshare&utm\\_source=twitter.com&utm\\_medium=social](https://www.npr.org/2022/06/07/1103569550/psychedelics-might-be-the-next-big-thing-in-mental-health-care-experts-say?utm_campaign=storyshare&utm_source=twitter.com&utm_medium=social)
31. Business Insider (6/8/2022); <https://www.businessinsider.com/psychedelics-clinical-trials-analysis-takeaways-challenges-2022-6>
32. CNN (6/11/2022); <https://www.cnn.com/2022/06/11/health/psilocybin-brain-changes-life-itself-wellness-scn/index.html>
33. Scripps Research, Science Changing Life (6/30/2022); <https://soundcloud.com/sciencechanginglife/episode-33-frederick-barrett-psychoactive-compounds-to-treat-depression-addiction-inflammation>
34. Associated Press (8/24/2022); <https://apnews.com/article/mushroom-psychedelic-alcoholism-study-a3b6692ae7590de9fd09a7cac271a199>
35. NPR (8/19/2022); <https://www.npr.org/transcripts/1118365654>

36. WBUR (8/23/2022); <https://www.wbur.org/news/2022/08/23/ayahuasca-church-new-hampshire>
37. Nature Outlook (9/8/2022); <https://www.nature.com/articles/d41586-022-02878-3>
38. PBS NOVA (10/19/22); <https://www.pbs.org/video/can-psychedelics-cure-lxqulz/>
39. LA Times (2/14/2023); <https://www.latimes.com/california/newsletter/2023-02-14/the-gnarly-and-painful-therapeutic-potential-of-magic-mushrooms-group-therapy>
40. CNN (5/10/2023); <https://www.cnn.com/2022/06/11/health/psilocybin-brain-changes-life-itself-wellness-scn/index.html>
41. CNN – The Whole Story, with Anderson Cooper (6/18/2023); <https://www.cnn.com/audio/podcasts/the-whole-story-with-anderson-cooper/episodes/0e231b5f-afad-4352-b2a0-b0270109b48f>

## FUNDING

### EXTRAMURAL Funding

#### *Current Extramural Research Funding*

- |           |   |
|-----------|---|
| 2023-2027 | Psychopharmacology of Psychedelic and Cannabinoid Compounds<br>Wana Brand Foundation<br>\$1,000,000<br><b>PI: Frederick Barrett, 10% FTE</b>  |
| 2023-2025 | Impact of Set & Setting on Psychedelic Therapy (JHU): Programmatic investigation of the influence of autobiographically salient music on psychedelic experiences<br>Steven and Alexandra Cohen Foundation<br>\$1,445,203<br><b>PI: Frederick Barrett, 20% FTE</b>   |
| 2019-2024 | The Center for Psychedelic and Consciousness Research (Center Director: <b>Frederick Barrett</b> )<br>Funded by the Steven and Alexandra Cohen Foundation and the Tim Ferriss Collective<br>Project: ‘Neurophysiological mechanisms and neurobiomarkers of response to psychedelic treatment in mood disorders and addiction’<br>\$1,526,134 Total Direct Costs, less center core resource support<br><b>PI: Frederick Barrett, 30% FTE</b> |
| 2019-2024 | The Center for Psychedelic and Consciousness Research (Center Director: <b>Frederick Barrett</b> )<br>Funded by the Steven and Alexandra Cohen Foundation and the Tim Ferriss Collective<br>Project: ‘Psilocybin treatment of major depressive disorder with co-occurring alcohol use disorder’<br>\$1,531,458 Total Direct Costs, less center core resource support<br><b>PI: Frederick Barrett, 30% FTE</b>                               |

#### *Previous Extramural Research Funding*

- |           |  |
|-----------|--|
| 2021-2022 | Comparison of the acute and enduring psychological and neural effects of DMT and salvinorin A.<br>PharmaDrug, Inc, Toronto, Ontario, Canada<br>\$56,163<br><b>PI: Frederick Barrett, 20% FTE</b>                         |
| 2019-2021 | Separate and combined effects of mindfulness meditation and savoring on pain-related corticostriatal function<br>1 R61 AT010134 01<br>NIH/NCCIH<br>PI: Patrick Finan, David Seminowicz<br>Role: Co-investigator, 15% FTE |
| 2019-2021 | Calibration of fMRI in emotional aging<br>1 R21 AG061851 01<br>NIH/NIA<br>PI: Peiyong Liu<br>Role: Co-investigator, 5% FTE   |

- 2016-2018 Measurement of persisting changes in emotional brain function produced by psilocybin  
1 R03 DA042336 01  
NIH/NIDA/NIBIB  
\$173,419  
**PI: Frederick Barrett, 30% FTE**
- 1984-2019 Clinical pharmacology/mechanisms of action of emerging abused drugs  
4 R01 DA003889 32  
NIH/NIDA  
\$275,288 (for year 32)  
PI: Roland Griffiths  
Role: Co-investigator, 23% FTE
- 2014-2019 A118G SNP and OPRM1 gene-mediated effects in humans  
1 R01 DA035246 04  
NIH/NIDA  
PI: Kelly Dunn  
Role: Co-investigator, 10% FTE
- 2013-2020 Effects of psilocybin on behavior, psychology, and brain function in long-term meditators  
Heffter Research Institute  
\$998,079  
PI: Roland Griffiths  
Role: Co-investigator, 32% FTE
- 2017-2020 Sleep and pain in sickle disease  
1 R01 HL133327 02  
NIH/NHLBI  
PI: Claudia Campbell, Jennifer Haythornthwaite  
Role: Co-investigator, 20% FTE

### **INTRAMURAL Funding**

#### *Current Intramural Research Funding*

- 2022-2024 Investigating the similarity of neural activity and memories across individuals during psychedelic experiences  
Hopkins Discovery Award  
\$100,000  
**PI: Frederick Barrett**

#### *Pending Intramural Research Funding*

None

#### *Previous Intramural Research Funding*

- 2016-2017 Molecular imaging of 5HT2A receptor occupancy by psilocybin in experienced hallucinogen users  
Nexus Award for Junior Investigators Seeking Imaging Support  
Johns Hopkins Institute for Clinical and Translational Research  
\$18,500  
**PI: Frederick Barrett, in-kind effort**
- 2015-2017 Identifying psychedelic and non-psychedelic music elements for psilocybin research  
Hopkins Discovery Award  
\$100,000  
PI: Hollis Robbins, Peabody Institute  
**SOM Co-PI: Frederick Barrett, 5% FTE**

2015 The effects of sleep disturbance on mesolimbic reward system function during positive affect analgesia and pain offset  
Hopkins Blaustein Pain Research Fund  
\$28,987  
PI: Patrick Finan  
Role: Co-investigator, in-kind effort

**CLINICAL ACTIVITIES: None**

**EDUCATIONAL ACTIVITIES** (*in chronological order, earliest first by start date under each subcategory*)

**Educational Focus**

My educational focus is academic mentorship within a clinical research environment. My career has been dedicated to the multi-disciplinary study of the brain and behavior, and specifically the cognitive and affective components of psychiatric disorders. My work both requires and is deeply enriched by a diverse team of scientifically-minded individuals and collaboration with experts in a range of disciplines, including psychology, medicine, pharmacology, biostatistics, physics, and the arts. The greatest potential for scientific breakthroughs resides in collaborative and multi-disciplinary science. As a mentor to graduate, medical, and postdoctoral students, as well as post-baccalaureate researchers, I have the opportunity to share this understanding and instill this approach while developing and refining academic and clinical research skills within my mentees, and while setting an inclusive and collaborative example for the next generation of scientific leaders. As an academic mentor, it is my duty to build and develop scientists at all levels, and to promote outstanding talent, especially in underrepresented mentees and colleagues.

**Classroom instruction**

2009 “Psychology of Music”, Teaching Assistant, Instructor: Petr Janata, University of California, Davis  
2010 “Language and Cognition”, Teaching Assistant, Instructor: Matthew Traxler, University of California, Davis  
2010 “Introduction to Psychobiology”, Teaching Assistant, Instructor: D. Owings, University of California, Davis  
2010 “Introduction to Cognition”, Teaching Assistant, Instructor: Kathleen Gibbs, University of California, Davis  
2014 “Music, Medication, and Psychedelics”, Guest Lecturer, Department of Psychology, Stevenson University  
2021 “Psychedelic Science”, Guest Lecturer, Behavioral Neuroscience, Johns Hopkins University  
2021 “Addiction Science”, Guest Lecturer, Institute for Addiction Science, University of Southern California  
2023 “Core Graduate Curriculum”, Lecturer, Department of Psychological and Brain Sciences, JHU, Baltimore

**Clinical Instruction**

None

**CME Instruction**

See Invited Talks

**Workshops/Seminars**

2022 “Psilocybin-Assisted Therapy and Traumatic Memories”, Integrative Psychiatry Institute, Niwot, CO  
2023 “Introduction to Psychedelic Neuroscience”, Psychedelic Science Conference 2023, Denver, CO

**Mentoring**

*Mentoring – Baccalaureate Mentees*

2021-2023 Kathy Shi, senior in Neuroscience, Krieger School of Arts and Sciences, JHU  
Publications: BC63

*Mentoring – Post-Baccalaureate Mentees*

2015-2016 Malinda McPherson, Research Assistant in JHM Otolaryngology-Head and Neck Surgery (now a PhD candidate in the Harvard/MIT Program for Speech and Hearing Bioscience and Technology)  
Publications: OR14  
2015-2017 Ethan Hurwitz, Research Coordinator (now PhD candidate in Psychology at the University of California, San Diego)  
Publications: OR30

- 2016-present Nathan Sepeda, Research Coordinator (applying to graduate neuroscience programs)  
Publications: OR37, OR40, OR44, OR47  
Conference Abstracts: **Barrett FS**, Doss MK, Sepeda N, Griffiths RR (October, 2019). Negative affect as a trans-diagnostic target for the therapeutic effects of psilocybin. *Inaugural Meeting of the International Society for Psychedelic Research*, New Orleans, LA.
- 2016-2017 Lucas Rosen, JHU Biophysics student (now a senior biomedical software analyst)
- 2017-2018 Kaitlyn Hay, Research Program Assistant (now a clinical research coordinator at Vanderbilt)
- 2017-2019 Johnathan Clifton, Research Program Assistant (now a medical student at the University of Maryland School of Medicine, class of 2023)  
Publications: OR39
- 2019-2022 Brian Winston, Research Program Coordinator (now mentee in Psychological and Brain Sciences)
- 2020-2022 Alexandra Tribo, Research Program Coordinator (now Research Program Supervisor)
- 2021-2022 Hope Chang, Research Program Coordinator (now lead UI/UX design in private industry)

#### *Mentoring – Pre-doctoral Mentees*

- 2014-2016 Mendel Kaelen, Doctoral student in psychology at Imperial College, London (PI: Robin Carhart-Harris, PhD; Dr. Kaelen received his PhD in 2018, and is now the CEO of a multi-national health-care technology company).  
Publications: OR12, OR15, OR24, RA51  
Conference abstracts: Kaelen M, Lorenz R, Roseman L, Santos-Ribeiro A, **Barrett FS**, Feilding A, Nutt D, Carhart-Harris R, Leech R (June 2017). The effects of LSD on music-evoked brain activity and emotion. *23<sup>rd</sup> Annual Meeting of the Organization for Human Brain Mapping*, Vancouver, British Columbia.
- 2017-2018 Reba Watsky, BA, JH medical student enrolled in the Scholarly Concentrations Program
- 2019-present Malcolm Matheson, JH medical student  
Publications: RA59
- 2021-2022 Emad Ibrahim, BS, JH medical student enrolled in the Scholarly Concentrations Program
- 2021-present Nathan Heller, BS, Doctoral student in psychology at Dartmouth University, visiting graduate scholar at the Johns Hopkins University School of Medicine
- 2021-2022 Hoyt Patrick Taylor, BS, Doctoral student in computer science at the University of North Carolina, Chapel Hill, visiting graduate scholar at the Johns Hopkins University School of Medicine  
Conference Abstracts: Winston B, Taylor HP, **Barrett FS**, Pekar JJ. On the Reliability of Connectome Harmonic Decompositions of Human Brain Structure and Function. *Annual Meeting of the International Society of Magnetic Resonance in Medicine*. (May 2022)
- 2022-present Brian Winston, Doctoral student in Psychological and Brain Sciences, JHU, Baltimore, MD  
Conference Abstracts: Winston B, Taylor HP, **Barrett FS**, Pekar JJ. On the Reliability of Connectome Harmonic Decompositions of Human Brain Structure and Function. *Annual Meeting of the International Society of Magnetic Resonance in Medicine*. (May 2022); Additional posters at OHBM, SfN, and the Brain Gradients Conference

#### *Mentoring – Thesis Committees*

- 2018-2019 Shima Rahimi Moghaddam, graduate student in Psychological and Brain Sciences, JHU (PI: Christopher Honey, PhD)
- 2019-present Houman Qadir, graduate student in Neuroscience, University of Maryland (PI: Brian Mathur, PhD)
- 2022-present Haley Dourron, graduate student in Psychology, University of Alabama, Birmingham (PI: Peter Hendricks, Ph.D.)
- 2022-present Brian Winston, graduate student in Psychological and Brain Sciences, JHU (Primary Mentee)
- 2023-present Samantha Soto, graduate student in Psychological and Brain Sciences, JHU (PI: Patricia Janak, PhD)

#### *Mentoring – Postdoctoral Mentees*

- 2015-present Human Pharmacology of Substance Abuse  
T32DA007209  
NIH/NIDA  
PI: Elise Weerts, PhD  
Role: Affiliated faculty member

- 2016-2018 Darrick May, M.D., Postdoctoral Fellow (now a clinical investigator on a Phase III clinical investigation of MDMA-assisted psychotherapy as a treatment for patients with PTSD)  
Publications: OR39, OR40
- 2017-2019 Alan Davis, Ph.D., Postdoctoral Fellow (now Assistant Professor, College of Social Work, The Ohio State University)  
Publications: OR36, OR40, OR42, OR44, OR47, OR49  
Conference Abstracts: Griffiths RR, **Barrett FS**, May DG, Cosimano M, Johnson MW, Davis AK (October, 2019). Psilocybin-assisted treatment of major depressive disorder: Preliminary results from a randomized trial. *Inaugural Meeting of the International Society for Psychedelic Research*, New Orleans, LA; Davis AK, May DG, Cosimano M, Johnson MW, **Barrett FS**, Griffiths RR (May, 2019). Psilocybin-assisted psychotherapy for the treatment of major depressive disorder: Preliminary results from a randomized controlled trial. *Annual Meeting of the American Psychiatric Association*, San Francisco, CA
- 2018-present Manoj Doss, Ph.D., Postdoctoral Fellow  
Publications: OR37, OR39, OR44, RA53, RA54, RA55, LC67  
Selected Conference Abstracts: Povazan M, Doss MK, Davis AK, Johnson MW, Griffiths RR, Barker PB, **Barrett FS** (April, 2020). A 7T MRS study of psilocybin administration in patients with major depressive disorder. *28<sup>th</sup> Annual Meeting of the International Society for Magnetic Resonance in Medicine*, Sydney, Australia, moved to virtual conference; Doss MK, Griffiths RR, May D, Johnson MW, Clifton J, **Barrett, FS** (December, 2019). The effects of inhaled salvinorin A on resting state functional connectivity in humans. *58<sup>th</sup> annual meeting of the American College of Neuropsychopharmacology*. *Orland, FL*; Doss MK, Griffiths RR, May DG, Johnson MW, Clifton JM, **Barrett FS** (October, 2019). The acute effects of inhaled salvinorin A on resting state functional connectivity in humans. *Inaugural Meeting of the International Society for Psychedelic Research*, New Orleans, LA; Doss MK, Koen J, Samaha J, **Barrett FS**, Griffiths RR, de Wit H, Gallo D. (November 2019). Psychoactive drugs and episodic memory: A meta-analysis of recollection, familiarity, and metamemory effects. *60<sup>th</sup> annual meeting of the Psychonomic Society*. *Montreal, Québec, Canada*; Doss MK, Griffiths RR, May D, Johnson MW, Clifton J, **Barrett FS** (October 2019). The effects of inhaled salvinorin A on resting state functional connectivity in humans. *49<sup>th</sup> annual meeting of the Society for Neuroscience*. *Chicago, IL*; Doss MK, Griffiths RR, May D, Johnson MW, Clifton J, **Barrett FS** (August 2019). The effects of inhaled salvinorin A on resting state functional connectivity in humans. *18<sup>th</sup> biennial meeting of the European Behavioural Pharmacology Society*. *Braga, Portugal*; Doss MK, Gallo D, de Wit H, Griffiths RR, & **Barrett FS** (June 2019). The effects of pre-encoding THC, psilocybin, and DXM on recollection and familiarity. *81<sup>st</sup> annual meeting of the College on Problems of Drug Dependence*. *San Antonio, TX, USA*; Doss MK, Griffiths RR, May D, Johnson MW, Clifton J, **Barrett FS** (April 2019). The effects of inhaled salvinorin A on resting state functional connectivity in humans. *Maryland Neuroimaging Retreat*. *Baltimore, MD, USA*
- 2019-2020 Aviv Aharon-Almagor, M.D., Hopkins-Tel Aviv Postdoctoral Fellow in Psychiatry
- 2019-present Andrew Gaddis, M.D., PG-1 Resident in Psychiatry, Johns Hopkins School of Medicine  
Conference Abstracts: Gaddis A, Nebel MB, Mostofsky S, Griffiths RR, Mejia AF, **Barrett FS** (June, 2020). A Novel Template-based ICA Approach Reveals Psilocybin-Induced Changes in Thalamic Connectivity. *2020 Meeting of the Organization for Human Brain Mapping*, Montreal, Canada, moved to virtual conference  
Publications: OR48, RA55
- 2020-present David Yaden, Ph.D., Postdoctoral Fellow  
Publications: RA53, RA58
- 2021-present Ceyda Sayali, Ph.D., Postdoctoral Fellow  
Publications: RA57, RA58
- 2023-present Andrew Gaddis, M.D., Postdoctoral Fellow  
Publications: OR48

### **Educational Program Building**

Steering committee member, MA/PhD program in Behavioral and Brain Sciences, Department of Psychiatry and Behavioral Sciences

## **Educational Demonstration Activities**

None

## **RESEARCH ACTIVITIES**

### **Research Focus**

As evidenced by my publication record, my career has been dedicated to the multi-disciplinary study of the brain and behavior, and specifically the cognitive and affective components of psychiatric disorders and psychoactive drug effects. As a postbaccalaureate research specialist, I helped to implement studies of affective and neural dysfunction in patients with schizophrenia. My graduate research involved the use of music and computational models of music cognition as tools to evoke and study the psychological schema and neural architecture of personally salient emotions and memories. My postdoctoral training involved integration of behavioral pharmacology and cognitive neuroscience. My current program of research capitalizes on the joint application of cognitive and affective neuroscience, behavioral pharmacology, and computational modeling approaches to investigate the acute and enduring therapeutic effects of classic and atypical psychedelic drugs in both healthy individuals and patients with mood and substance use disorders. My goal is to broaden our understanding of the interaction between neuroreceptors, systems-level neural circuits, micro and macro-biology, mood and cognition, and altered states of consciousness in healthy individuals and those suffering from psychiatric disorders in order to advance our understanding of the etiology, neurobiology, and treatment of mood and substance use disorders.

### **Research Program Building/Leadership**

I served for 3 years as the Director of Neurophysiological Mechanism and Biomarker Assessment in the recently established Center for Psychedelic and Consciousness Research (CPCR). In this role, I established and led multi-collaborative, center-wide cognitive, behavioral, and multi-modal neuroimaging assessment protocols, with the goal of identifying common and unique neurocognitive biomarkers of therapeutic response to psilocybin across a variety of indications. I then served as the Associate Director and Acting Director of the CPCR, and finally now serve as Director of the CPCR where I am working to support faculty as well as expand and continue our world-leading program of research into the basic and therapeutic behavioral and biological effects of psychedelic drugs.

### **Research Demonstration Activities**

None

### **Inventions, Patents, Copyrights**

Brief Opioid Overdose Knowledge (BOOK) Questionnaire, © 2018 (Kelly Dunn and Frederick Barrett)

### **Technology Transfer Activities**

None

## **SYSTEM INNOVATION AND QUALITY IMPROVEMENT ACTIVITIES: None**

## **ORGANIZATIONAL ACTIVITIES**

### **Institutional Administrative Appointments**

2020-present Johns Hopkins Medicine Institutional Review Board

### **Editorial Board Appointments**

2022-present Editorial Board, Psychedelic Medicine

2020-2022 Current Topics in Behavioral Neuroscience (<http://link.springer.com/bookseries/7854>)  
Co-Editor for Volume 56, titled "Disruptive Psychopharmacology"  
(<https://link.springer.com/book/10.1007/978-3-031-12184-5>)

2018 Frontiers Research Topic Editor: "Integrative Multimodal Multiparametric Neuroimaging"

### **Journal peer review activities**

Addictive Behaviors; Addiction Biology; American Journal of Psychology; Behavioral Brain Research; Brain and Cognition; Brain Imaging and Behavior; British Journal of Pharmacology; Cannabis and Cannabinoid Research; Child Development; Cortex; Drug and Alcohol Dependence; Drug Science, Policy, and Law; Emotion; Frontiers in Psychology; Frontiers in Neuroscience; Frontiers in Pharmacology; Human Brain Mapping; Human Psychopharmacology: Clinical and Experimental; IEEE Transactions on Affective Computing; International Journal of Neuropsychopharmacology; International Journal of the Psychology of Religion; Journal of Affective Disorders Journal of Psychoactive Drugs; Journal of Psychopharmacology; Memory; Molecular Psychiatry; Musicae Scientiae; NeuroImage; Neuropsychanalysis; Neuropsychopharmacology; Neuroscience & Biobehavioral Reviews; Perception; PLOS ONE; Proceedings of the National Academy of Science; Psychology & Neuroscience; Psychological Medicine; Psychomusicology: Music, Mind, and Brain; Psychopharmacology; Reviews in Neuroscience; Scientific Reports

### **Other peer review activities**

Ad-hoc Grant Reviewer for the Heffter Research Institute and the OPEN Foundation

### **Advisory Committees, Review Groups/Study Sections**

2018 NIH CSR Study Section: ZMH1 ERB-D (06) NIMH Special Emphasis Review Panel  
2018 NIH CSR Study Section: ZAT1 VS (12) NCCIH Training and Grants Review  
2018 NIDA Diversity Fellowship Reviewer  
2022 NIH CSR Study Section: ZMH1 ERB-D (02) S, NIMH Special Emphasis Review Panel  
2022-present National Network of Depression Centers, Task Group on Psychedelics and Related Drugs: Co-Chair

### **Professional Societies**

2016 Founding Member, International Society for Research on Psychedelics

### **Conference Organizer**

#### *JHMI/Regional*

2020-2022 Hopkins Psychiatry Research Conference Organizing Committee

#### *National*

2018 Poster committee, Maryland Neuroimaging Retreat

#### *International*

2017 Program Committee member, International Conference on Affective Computing and Intelligent Interaction

### **Session Chair**

2023 “Psychedelic Drugs”, Chair and Moderator, Press Conference for the annual Society for Neuroscience Conference, Washington, DC

### **Consultantships**

2020-present Scientific Advisory Board for Wavepaths, Ltd.  
2022-present Scientific Advisory Board for MindState Design Labs, Inc  
2023-present Scientific Advisor for Gilgamesh Pharmaceuticals, Inc

### **Extramural Service**

2016-2021 NIH Intramural IRB: Non-NIH-affiliated scientific member  
2020-2023 NIH/NIDA Intramural Data and Safety Monitoring Board  
2020-present Chair, Data and Safety Monitoring Board  
“Visual surround suppression and perceptual expectation under psilocybin”  
PI: Jessica L. Nielson, Ph.D.  
Department of Psychiatry and Behavioral Sciences, University of Minnesota Medical School

## RECOGNITION

### Awards, Honors

1998-2002	Temple University Academic Achievement Scholarship
2004	Temple University Departmental Honors, Psychology
2010	Best Poster Award, UC Davis Psychology Department Annual Conference
2013	UC Davis Psychology Department Dissertation Fellowship
2014	NIH/NIDA Loan Repayment Award, “Phenomenology and Adverse Effects of Emotionally Salient Pharmacological Agents”
2016	NIH/NIDA Loan Repayment Award Renewal
2020	American College of Neuropsychopharmacology (ACNP) Travel Award

### Invited Talks

#### *Invited Talks – JHMI/Regional*

10/07/14	“Brain Networks Involved in Strong Experiences with Music.” Psychiatry Research Conference, Department of Psychiatry and Behavioral Sciences, Johns Hopkins University School of Medicine, Baltimore, MD
03/25/15	“Musical structure is tracked by different brain regions in different psychological contexts.” Brain Sciences Imaging Core and Section of High-Resolution Brain PET, Johns Hopkins University School of Medicine, Baltimore, MD
03/24/18	“Salvia divinorum.” Panel discussion, D.C. Psychedelic Society, Washington, D.C.
04/16/18	“Psychedelics, music, and meditation: Tools for studying consciousness.” Psychiatry Research Conference, Department of Psychiatry and Behavioral Sciences ‘Head Talk’ Weekly Seminar Series, Department of Neurology, Johns Hopkins University School of Medicine, Baltimore, MD
11/06/18	“Potential mechanisms underlying psychedelic therapeutic effects.” Psychiatry Research Conference, Department of Psychiatry and Behavioral Sciences, Johns Hopkins University. Baltimore, MD.
02/13/19	“Potential mechanisms underlying psychedelic therapeutic effects.” Grand Rounds, Clinical Pharmacology, Johns Hopkins University School of Medicine, Baltimore, MD.
02/10/21	“The neural architecture of music listening in a variety of psychological and pharmacological contexts.” The NeuroTea meeting, Department of Psychological and Brain Sciences, Johns Hopkins University, Baltimore, MD.
06/02/21	“Acute and Persisting Effects of Psilocybin on Human Cognition and Brain Function,” Department of Psychological and Brain Sciences, Johns Hopkins University, Baltimore, MD
11/14/22	“The Neuropsychopharmacology of Psychedelic Drugs,” ( <u>CME Talk</u> ) Grand Rounds in Psychiatry, Department of Psychiatry and Behavioral Sciences, Johns Hopkins University School of Medicine, Baltimore, MD
06/03/23	“Research Updates from the Center for Psychedelic and Consciousness Research”, School of Medicine Alumni Weekend, Johns Hopkins University, Baltimore, MD
02/04/24	“The Neuropsychopharmacology of Psychedelic Drugs,” JHU Schizophrenia Seminar Series, Baltimore, MD

#### *Invited Talks - National*

08/25/10	“Music, Memory, and the Brain.” <i>A Night to Remember</i> , Benefit dinner for the Alzheimer’s Association Memory Walk, Stratford at Countrywood, Lafayette, CA
11/31/14	“Mixed Emotions: Prefrontal, limbic, and insular activity during music-evoked nostalgia.” Fellow Talk Series, NIDA Intramural Research Program, Baltimore, MD
03/30/15	“Behavioral and Neural Correlates of Classic Hallucinogens.” Talk and Panel Discussion on Illicit Drugs and Health, Provost’s Year of Health Series, University of Pennsylvania, Philadelphia, PA.
08/14/15	“Mystical and challenging experiences, and changes in the brain, encountered with psilocybin.” Invited Lecture at the 35 <sup>th</sup> Annual Telluride Mushroom Festival, Telluride, CO
10/10/15	“Psilocybin, Meditation, Mystical Experiences, and the Brain.” Invited Talk, 9 <sup>th</sup> Annual Horizons: Perspectives on Psychedelics Conference, New York, NY
05/10/16	“Psilocybin, Meditation, Mystical Experiences, and the Brain.” Invited Talk, Yale Psychedelic Science Research Group, Yale University, New Haven, CT
06/14/16	Acute effects of psilocybin on brain activity and connectivity during positive emotional experience. 78 <sup>th</sup> Annual Meeting of the College on Problems of Drug Dependence, Phoenix, AZ.

- 04/20/17 “Music and the psychedelic experience.” Invited Talk, Cognitive and Information Sciences Program, University of California, Merced, CA
- 04/24/17 “Music and the psychedelic experience.” Invited Talk, Visual Cognition Group, Center for Mind and Brain, University of California, Davis, CA
- 12/08/17 “The Science of Psychedelics.” Invited Talk, Neuroscience Club, University of South Carolina, Aiken, SC
- 06/22/18 “Psilocybin, meditation, mystical experiences, and therapeutic outcomes.” Invited Talk, Los Angeles Psychedelic Science Symposium, University of California, Los Angeles, CA
- 02/19/19 “Research on therapeutic applications of psilocybin.” Mycological Society of San Francisco (MSSF) and Bay Area Applied Mycology (BAAM). San Francisco, CA
- 02/20/19 “Research on therapeutic applications of psilocybin.” Marin County Mycological Society. Mill Valley, CA
- 02/21/19 “Potential mechanisms underlying psychedelic therapeutic effects.” San Francisco VA Medical Center.
- 02/21/19 “Potential mechanisms underlying psychedelic therapeutic effects.” Psychedelic and Entheogenic Academic Council (PEAC), Neuroscience Graduate Program, University of California, San Francisco.
- 04/05/19 “Potential mechanisms underlying the enduring effects of psychedelic drugs.” First Intercollegiate Psychedelic Summit, University of Pennsylvania, Philadelphia, PA.
- 04/26/19 Invited Scientific Panel Speaker, FDA Mini-Symposium titled “Psychedelics: Psychopharmacology and Medication Assisted Psychotherapy – Clinical, Regulatory, and Policy Considerations.” Food and Drug Administration, Silver Spring, MD.
- 11/05/19 “Enduring effects of psilocybin on affect and the neural response to emotional stimuli.” Neuroscience Graduate Group Lecture Series Seminar, University of Wisconsin, Madison, WI.
- 12/08/19 “Psilocybin therapy is associated with reduced amygdala response to negative affective stimuli and normalization of cortical glutamate one week after psilocybin, and improved cognitive flexibility one and four weeks after psilocybin, in patients with major depressive disorder.” In symposium titled “Turned on by psychedelics: putting LSD, psilocybin, and MDMA to work to treat psychiatric disease.” 57<sup>th</sup> Annual Meeting of the American College of Neuropsychopharmacology, Orlando, FL
- 04/27/20 “Psychedelic therapy for psychiatric disorders.” (CME Talk) Annual Meeting of the College of Psychiatric and Neurologic Pharmacists, Dallas, Texas. (moved to virtual conference)
- 06/10/20 “Acute and enduring effects of psychedelic drugs on affect, cognition, and brain function.” NIDA/NIAAA Neuroscience Workgroup, Bethesda, MD (virtual talk).
- 09/23/20 “Neuropsychopharmacology of psychedelic drugs and affect.” (CME Talk) Psychiatry Grand Rounds, Temple University School of Medicine, Philadelphia, PA.
- 10/02/20 “Psychedelic drugs and pain.” (CME Talk) Montana Pain Conference, Butte, MT.
- 03/04/21 “The neuropsychopharmacology of psychedelic drugs.” NIDA Clinical Rounds, Baltimore, MD.
- 04/13/21 “The neuropsychopharmacology of psychedelic drugs.” Psychiatry Grand Rounds, SUNY Stony Brook School of Medicine, Stony Brook, NY (virtual talk).
- 06/16/21 “The neuropsychopharmacology of psychedelic drugs.” (CME Talk) Psychiatry Grand Rounds, Drexel University/Tower Healthcare System, Philadelphia, PA (virtual talk).
- 09/22/21 “Psychedelic therapies for mood disorders”, 13<sup>th</sup> annual conference of the National Network of Depression Centers (“Transforming Science, Transforming Society”), virtual conference.
- 09/28/21 “The neuropsychopharmacology of psychedelic drugs.” Psychiatry Grand Rounds, Carver College of Medicine, the University of Iowa, Iowa City, Iowa.
- 10/21/21 “The neuropsychopharmacology of psychedelic drugs.” Institute for Addiction Science, University of Southern California, CA
- 05/12/22 “The neuropsychopharmacology of psychedelic drugs.” Department of Anatomy and Neurobiology, University of Maryland School of Medicine, Baltimore, MD
- 06/15/22 “The neuropsychopharmacology of psychedelic drugs.” Center for Depression, Anxiety, and Stress Research, Harvard Medical School/McLean Hospital, Belmont, MA
- 05/23/22 “Enduring effects of psilocybin therapy in major depressive disorder.” The 2<sup>nd</sup> Annual Psychedelic & Therapeutic Drug Development Conference, Washington, DC
- 09/26/22 “Psychedelic Neuroscience,” (CME Talk) the SoundMind Institute, Philadelphia, PA
- 09/28/22 “The Neuropsychopharmacology of Psychedelic Drugs,” Institute for Addiction Sciences, University

- of Southern California, Los Angeles, CA
- 10/07/22 “Therapeutic Uses of Psychedelics”, (CME Talk) Substance Use Disorder Summit of the American Association of Psychiatric Pharmacists, Virtual Meeting
- 11/04/22 “The Neuropsychopharmacology of Psychedelic Drugs,” Caron Treatment Centers’ 7<sup>th</sup> Annual Addiction Research Symposium, Wernersville, PA
- 03/23/23 “The Cognitive Neuroscience of Psychedelic Experiences,” Psychedelic Science Colloquium, Institute for Psychedelics and Neurotherapeutics, University of California, Davis, Davis, CA
- 04/12/23 “The Neuropsychopharmacology of Psychedelic Drugs”, Adler Lecture, Mahoney Institute of Neuroscience, University of Pennsylvania, Philadelphia, PA
- 05/17/23 “Regulatory perspectives on psychedelic science”, Annual Meeting of the Association for the Accreditation of Human Research Protection Programs (AAHRPP), Baltimore, MD
- 07/15/23 “Establishing a psychedelic research center”, Philadelic Conference, Philadelphia, PA
- 08/04/23 “The Neuropsychopharmacology of Psychedelic Drugs”, American Psychological Association Meeting, Washington, DC
- 09/08/23 “Overview of the research program at the Center for Psychedelic and Consciousness Research”, State of the Art Symposium, Veteran’s Affairs Administration (virtual talk)
- 10/19/23 “The Neuropsychopharmacology of Psychedelic Drugs”, (CME Talk) Grand Rounds in Psychiatry, Massachusetts General Hospital (virtual talk).

*Invited Talks - International*

- 04/22/17 “Exploring the interaction of psilocybin and meditation.” 3<sup>rd</sup> International Psychedelic Science Conference (Psychedelic Science 2017), Oakland, CA.
- 03/27/18 “The Neurobiology of Psychedelic Drugs and Mystical Experiences.” Invited Talk, Psychedelic Science Interest group, Department of Psychiatry, University of Toronto/CAMH, Ontario, CA
- 08/14/18 “PET and fMRI measures of serotonin system involvement in psychiatric disorders.” Xuanwu Hospital, Capital Medical University, Beijing, China
- 08/15/18 “Techniques for combining PET and fMRI measurements to investigate serotonin system involvement in psychiatric disorders.” First Affiliated Hospital of Xi’an Jiatong University, Xi’an, China
- 08/16/18 “MRI basics and combination with molecular PET imaging for the investigation of psychiatric disorders”, Department of Medical Imaging Engineering, Xuzhou Medical University, Xuzhou, Jiangsu, China
- 08/18/18 “Combining PET and fMRI to investigate serotonin system involvement in psychiatric disorders.” Keynote Speech, 3<sup>rd</sup> China-America Nuclear Medicine Academic Forum and the First International Conference on Ultra-Sensitive Brain PET Imaging, Linyi, Shandong, China
- 03/03/20 “The neuroscience of psychedelic drugs, music, and nostalgia.” TEDMED 2020, Boston, MA, released online October 1, 2020 (<https://www.tedmed.com/talks/show?id=770763>).
- 03/13/21 “Psychedelics.” Altered States of the Human Mind: Implications for Anthropogeny, sponsored by the Center for Academic Research & Training in Anthropogeny (CARTA) at UC San Diego, CA.
- 05/05/21 “Potential mechanisms underlying psilocybin therapy for MDD.” The Psychedelic & Therapeutic Drug Development Conference (virtual conference)
- 02/20/22 “Psilocybin for the treatment of mood and substance use disorders”, talk and panel discussion given during a symposium entitled “Psychedelics in Mental Health”, Annual Meeting of the American Association for the Advancement of Science (AAAS), Philadelphia, PA
- 05/23/22 “The durability of psilocybin therapy for the treatment of mood disorders,” The Psychedelic Therapeutics & Drug Development Conference, Washington, DC
- 06/24/22 “Psychedelics in Medicine,” Stavros Niarchos Foundation Nostos Meeting, Athens, Greece
- 04/11/23 “Demystifying Mushrooms,” NIH Demystifying Medicine Lecture Series (virtual)
- 06/11/23 “Psychedelic Treatments in Psychiatry”, Shanghai Mental Health Center Webinar Series (virtual)
- 06/21/23 “Cognitive and Neural Impact of Psychedelics”, Psychedelic Science Conference, Denver, CO
- 09/28/23 “The promise and peril of psychedelic interventions,” World Human Forum, Eleusis, Greece
- 10/22/23 “Psychedelics in Medicine,” Keynote for the Opening Meeting of the Institute for Psychedelic Research at Tel Aviv University, Tel Aviv, Israel
- 12/12/23 “Therapeutic effects and underlying mechanisms of psilocybin therapy”, Psychedelic Medicine – Israel, Tel Aviv, Israel